

Work Order ID 54802

December 22, 2009 1:24:36 PM



Page 1

Item ID: D3676-1

Accept



Setup Start



Revision ID:

Item Name: BUBBLE WINDOW

Stop



Start Date: 1/04/10 Start Qty: 4.00



Cust Item ID:

Required Date: 1/15/10 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: CL

Date: 09/12/23 Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3676

Rev B

100



HAND FINISHING THERMOFORMING

Thermoform

Thermoforming Machine

Memo

0.00

0.00

110



HAND FINISHING THERMOFORMING

Thermoform

Thermoforming Machine

Memo 33 1/2 x 50 x 3

Cut Blanks to 30" by 48"

36 x 52 x 4

0.00

0.00

33 1/2 x 50" x 3pc

36" x 52" x 4pc

BB 10/01/05
BB X7 SCRAP
10/01/07
(X7)

120



THERMOFORMING MACHINE

Thermoform

Thermoforming Machine

Memo

0.00

0.00

Thermoform as per Dwg. D3676 and Folio FTA 018 Dwg. Rev. B
Folio Rev. C

BB 10/01/05
10/01/07
(X7)
X7 SCRAP
10/01/07
(X7)

W 10/01/07 x 4
W 10/01/05 X7
PTO SCRAP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval. QC Inspector

Part No: D3676-1 PAR #: Fault Category: Thermoforming NCR: Yes No DQA: / Date: 1003-04
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: / Date: 10/03/04

NCR: 54802		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10-01-05	120	7 bubble windows scrap. Windows kept pulling out the clamps when the material was being vacuumed. Folio c same process was being followed. R.e. process.	<u>ES1442</u>	<ul style="list-style-type: none"> - Scrap all windows. No more material to replace. - Vacuum process was reversed Ex: Mild/Soft vacuum \rightarrow hard suction, and 1 window formed correctly, but is scrap because it was heated twice & air bubbles were visible. 	10/01/05 W.R.	<u>S</u> 10/02/05	<u>ES1442</u>	<u>10-01-05</u>

NOTE: Date & initial all entries

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Item ID: D3676-1

Accept



Setup Start



Revision ID:

Item Name: BUBBLE WINDOW

Stop



Start Date: 1/04/10 Start Qty: 4.00



Cust Item ID:

Required Date: 1/15/10 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



QC2- Inspect parts off machine FAI/FAIB

0.00

SL 10/01/07 (4)

QC

Quality Control

Memo

0.00

1) Check Surface finish for undesired marks, voids, dimples etc. 2) Check depth of bubble to ensure conformity to drawing tolerances.

140



QC8- Inspect parts - second check

0.00

BB 10/01/02 (4)

QC

Quality Control

Memo

0.00

150



HAND FINISHING THERMOFORMING

0.00

10/01/21 SL (4)

Thermoform

Thermoforming Machine

Memo

0.00

1) Trim off excess flange material 2) Buff out any light scratches or blemishes 3) Etch part number and batch number

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 54802

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Item ID: D3676-1

Accept



Setup Start



Revision ID:

Item Name: BUBBLE WINDOW

Stop



Start Date: 1/04/10 Start Qty: 4.00



Cust Item ID:

Required Date: 1/15/10 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160



QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Quality Control

Memo

0.00

10/01/21 DL
 X3
 PTO

170



QC5- Inspect part completeness to step on W/O

0.00

QC

Quality Control

Memo

0.00

8/01/23

13
 4

1) Visually inspect for clarity, and proper formation.

180



Identify as per dwg & Stock Location:

0.00

Packaging

Packaging

Memo

PPN
 54 PIS

10/01/21 C

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/01/21	160-	GLOVE FELL INTO WINDOW WHILE THERMOFORMING. TRIED TO POLISH OUT DUST. NOT GOOD RESULTS.	POSIML	SCRAP 1 WINDOW. NO-REPLACE.	10/01/21 Wtu.	S 10/02/23	POSIML	S 10/02/23
		R.C. had herring to take it out of machine.	POSIML				POSIML	S 10/02/23

NOTE: Date & initial all entries

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Item ID: D3676-1

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Revision ID:

Item Name: BUBBLE WINDOW

Stop



Start Date: 1/04/10 Start Qty: 4.00



Cust Item ID:

Required Date: 1/15/10 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan:

Date: Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190



QC21- Final Inspection - Work Order Release

0.00

QC

Quality Control

Memo

0.00

10/03/02

10-2-26

(3)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 54802



Parent Item: D3676-1



Parent Item Name: BUBBLE WINDOW

Start Date: 1/04/10

Required Date: 1/15/10

Comments:

Start Qty: 4.00

Required Qty: 4.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MACRLICS.236		Purchased	No				sf	183.0000	52.0260			

Plexiglass G .236"



Warehouse Loc Qty Loc Code

Location

Main Warehouse

MAT

107871
110577
M 113571

183

22

161

3pc
4pc
4pc

10/01/04
10/01/05
10/01/07

39
52
52

39
52
52

13.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	54802
Description:		Part Number:	D36076-1
Inspection Dwg:	Rev:		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than "	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by:

Dh.

Date:

10/01/05

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
46.0"	+/- .100	46.1"	✓			
29.1"	+/- .100	29.1"	✓			
17.0"	+/- .15"	16.9"	✓			
0.050"	MIN	0.074"				
0.070"	MIN	0.119"				
0.090"	MIN	0.140				

Measured by:

Dh.

Date:

10/01/05

Audited by:

S

Date:

10/02/05

Prototype Approval:

Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/DL	

DART AEROSPACE LTD	Work Order:	54802
Description:	Part Number:	D3676-1
Inspection Dwg:	Rev:	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than _____"	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: *Wk* Date: 10/01/05

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
46.0"	+-.100"	46.0	✓			
29.1"	+-.100"	29.1	✓			
17.00	+-.25"	16.7"	✓			
.050"	.0410	.073"	✓			
.070"	.0610	.106	✓			
.090"	.0810	.112	✓			

Measured by: *Wk* Date: 10/01/05

Audited by: *S* Date: 10/02/05

Prototype Approval: Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/DL	

DART AEROSPACE LTD	Work Order:	54802
Description:	Part Number:	D3676-1
Inspection Dwg:	Rev:	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than _____"	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: *DL* Date: *10/01/05*

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
44.0"	± .100	46.8"	✓			
29.1	± .100	29.1"	✓			
17.0"	± .125	16.25"	✓			
0.038"	M/N	0.024"	✓			
0.070"	M/N	0.100"	✓			
0.090"	M/N	0.110"	✓			

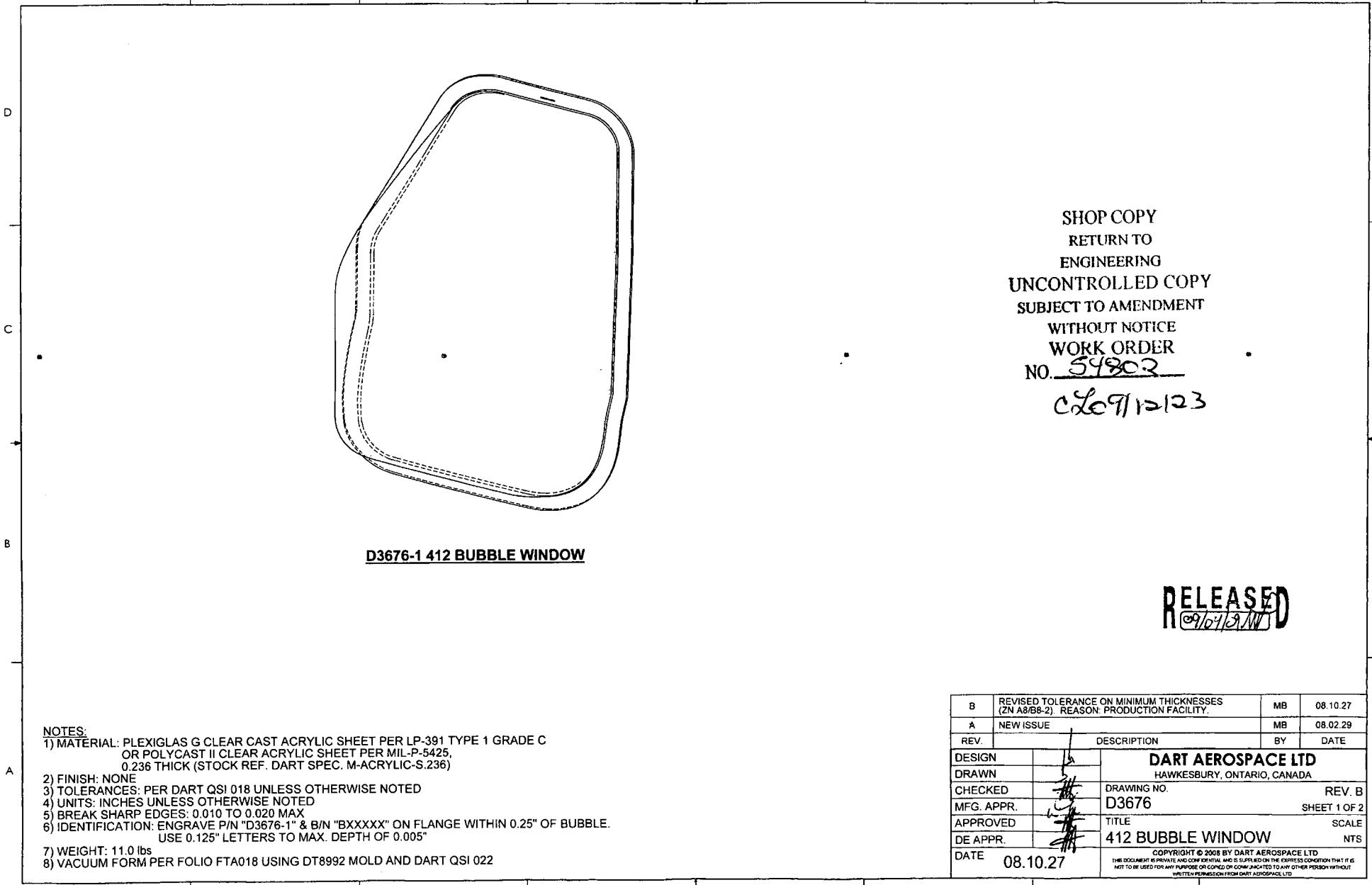
Measured by: *DL* Date: *10/01/05*

Audited by: *S* Date: *10/02/05*

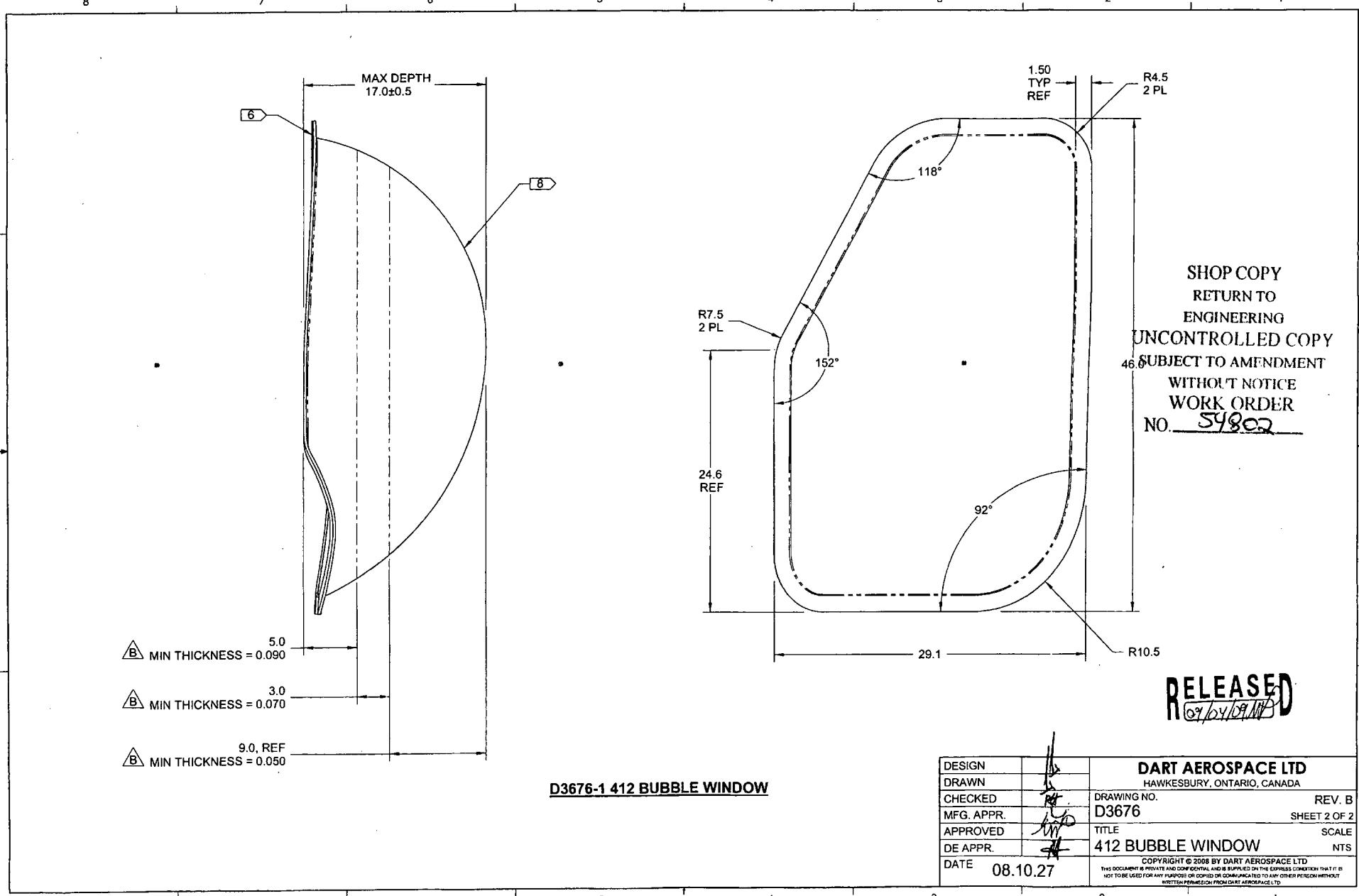
Prototype Approval: Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/DL	

8 7 6 5 4 3 2 1



8 7 6 5 4 3 2 1



DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3676
MFG. APPR.		REV. B
APPROVED		SHEET 2 OF 2
DE APPR.		TITLE 412 BUBBLE WINDOW
DATE	08.10.27	SCALE NTS

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